

Part 2 -- Amendments to Specification

1. Replace the paragraph at page 12, line 26, with the following which has been marked to show differences from the original form of that paragraph:

The support contour 22 also includes a recessed channel area 46 which extends vertically upward from the lowermost surface area 32 of the cavity 28 to an upper rear edge of the support contour 22, as shown in Figs. 3, 7 and 8. The channel area 46 is located at approximately the transverse center of a rear wall 48. The rear wall 48 extends from one transverse side or edge 49 of the cushion 20 ~~cavity 28~~ from a location generally adjacent to one greater trochanter relief area 36 around the rear of the cavity 28 to the other transverse side or edge 51 of the cushion 20 ~~cavity 28~~ at a location generally adjacent to the other greater trochanter relief area 36, as shown in Figs. 1, 2 and 8. The greater trochanter relief areas 36 generally curve vertically downward and transversely inward from the outer periphery of the back wall 48 at these opposite transverse positions of the support contour 22. As shown in Fig. 3, the rear wall 48 rises to an elevation at the rear of the cavity 28 which is sufficient to orient the pelvic area within the cavity 28 to resist rearward pivoting or rocking movement of the pelvic bones 42.

2. Replace the paragraph at page 13, line 9, with the following which has been marked to show differences from the original form of that paragraph:

The channel area 46 is located on the rear wall 48 on opposite sides of a longitudinal ~~transverse~~ midline 58 through the cushion 20. The channel area 46 extends downwardly and longitudinally forward from the back wall 48 toward the lowermost surface area 32 of the cavity 28 at the transverse midline of the support contour 22. The channel area 46 is positioned in the support contour 22 to be located directly behind the coccyx 50 and the sacrum 52 of the pelvic skeletal structure 24, when the user is seated in the cushion 20. The coccyx 50 is typically referred to in common language as the "tailbone."

3. Replace the paragraph at page 13, line 17, with the following which has been marked to show differences from the original form of that paragraph:

The channel area 46 is recessed into the rear wall 48 of the cavity 28 to a sufficient distance to establish a vertical and horizontal clearance 54 between the channel area 46 and the coccyx 50 and sacrum 52, as shown in Fig. 3. The channel area 46 also establishes a transverse clearance 55 which extends beyond each opposite lateral side of the coccyx 50 and sacrum 52, as shown in Fig. 7. A general midline contour of the rear wall 48 is illustrated by the dashed line 56 in Fig. 7. The dashed line 56 represents the exact anatomical shape of the rear pelvic area of a specific or generalized user. The amount of recess of the channel 46 into the rear wall 48 is illustrated by the offset of the channel area 46 behind the dashed line 56. The transverse extent of the channel area 46 is illustrated by its extent on opposite sides of a longitudinal midline ~~centerline~~ 58. Since the sacrum 52 generally tapers transversely inwardly toward the narrower coccyx 50, the channel area 46 may also have a slightly V-shaped curvature to generally parallel the downward and inward tapering of the sacrum 52 and coccyx 50.

4. Replace the paragraph at page 12, line 26, with the following which has been marked to show differences from the previously amended form of that same paragraph:

The support contour 22 includes two support areas 60 and 62 which are located on the back wall 48 at ~~[[of]]~~ positions on opposite transverse sides of the longitudinal midline 58, as shown in Figs. 5 and 7. The support areas 60 and 62 extend forwardly from the midline contour line 56, and therefore provide more protuberance to create exaggerated pressure and support on the tissue and musculature at the posterior lateral buttocks of the pelvic area which is contacted by the support areas 60 and 62. As shown in Fig. 5, the support area 60 (the support area 62 is similar, but not shown in Fig. 5) generally curves vertically downwardly and transversely and longitudinally forwardly from an upper position on the back wall 48 toward the lowermost surface area

32. The support areas 60 (and 62, not shown in Fig. 5) terminate vertically above the lowermost surface area 32. Oriented in this manner, the support areas 60 and 62 define forwardly and upwardly facing contact surfaces to contact the skin covering the tissue masses surrounding the pelvic bones 42 at the lateral posterior buttocks. The posterior lateral buttocks tissue and musculature are devoid of any underlying prominent bone structure. Instead, the considerable mass of posterior lateral buttocks tissue and musculature defines a relatively broad and substantial contact area which is able to accept and transfer the force into the pelvic skeletal structure which does not elevate the risk of developing pressure ulcers at those locations.

5. Replace the paragraph at page 16, line 1, with the following which has been marked to show differences from the original form of that paragraph:

The support contour 22 also provides enhanced support from areas 64 and 66 which are located beneath the thigh bone 26 proximal to the greater trochanters 38, as shown in Figs. 3, 6 and 8. The enhanced support areas 64 and 66 contact a relatively broad mass of tissue and muscle extending along the proximal ~~posterior~~ thigh bone 26. The proximal ~~posterior~~ thigh bone 26 extends generally longitudinally and has no prominences in the area where the support areas 64 and 66 contact the tissue surrounding the proximal ~~posterior~~ thigh bones 26. The support areas 64 and 66 are able to transfer a relatively significant amount of pressure into the relatively broad mass of proximal ~~posterior~~ thigh tissue and musculature to thereby support the skeletal structure.

6. Replace the paragraph at page 17, line 22, with the following which has been marked to show differences from the original form of that paragraph:

The transfer of significant force into the proximal ~~posterior~~ thigh tissue and musculature at the location of the support areas 64 and 66 complements the additional support from the areas 60 and 62 to maintain alignment for proper postural position of the pelvic area. The location of the support areas 60, 62, 64 and 66, as shown in Fig.

8, is at approximately the four transverse and longitudinal positions surrounding the pelvic structure to facilitate holding the pelvic structure into a position of proper postural alignment and to stabilize the user when seated on the support contour.

7. Between the paragraph ending at line 25, page 19, and the paragraph beginning at line 26, page 19, add the following three paragraphs:

The type of moldable material preferred for use in the present invention is generally circular polyethylene beads. Each of the polyethylene beads is formed with an exterior coating which is activated by heat. Once activated, the coating of each bead adheres to the coating of its adjoining beads, thereby linking all of the beads together in a single matrix-like structure which forms the resilient support structure from which the cushion is formed.

The plastic beads are available in different shapes, sizes, densities and materials. For polyethylene spherical beads, the typical diameter is in the range of 0.1875 to 0.25 inches, and the typical density is in the range of 12 grams per liter to 27 grams per liter. When square or pillow-shaped polypropylene beads are used, the size may be in the range of approximately 0.1875 inches on the side to approximately 0.09375 inches on the side, with a density of approximately 29 grams per liter.

Because of the generally circular nature of the beads and the fact that the beads are fused together at contact points, the resulting matrix-like structure of adhered beads has porosity which allows air and liquid to pass through the matrix-like support structure. This is a particular advantage in wheelchair cushions, because the ventilation of air to the areas of skin which are at risk for pressure ulcers generally decreases the incidence of such pressure ulcers.